

diction such patient is, on a card supplied by the State Department of Public Health, the patient's initials, sex and date of birth.

"The local health officer shall forward these reports to the State Department of Public Health at least weekly.

"The physician shall keep a record by name and address of each patient treated.

"The name and address of the patient shall be reported to the local or state health official to whom the attending physician is required to report such case, upon the special request of such official if in his judgment this may be necessary to prevent the spread of the disease to other persons.

"Whenever any person suffering from syphilis or gonorrhea shall discontinue treatment while, in the judgment of the attending physician, he is capable of transmitting the disease to others, such physician shall report immediately such facts, together with the patient's initials and date of birth to the local or state health official to whom the attending physician is required to report such case.

"Records of any local department of health or of any local health officer or of any laboratory, clinic or other institution relating to cases of syphilis or gonorrhea shall be confidential except in so far as may be necessary to carry out the provisions of the law and these regulations."

In order that adequate facilities and efficient methods of treatment may be made available, basic requirements for the conduct of clinics, both as to equipment and methods of procedure, are made. A state-wide survey is now being undertaken for the purpose of developing and adopting uniform standards in the conduct of clinics.

Through the use of National Social Security funds allotted to the California State Department of Public Health, the following services will be made available:

1. Public health nurses to do follow-up field work in order that patients who begin treatment may continue without lapses which are common in patients suffering from these diseases.

2. Distribution of arsenical and bismuth preparations to be used in the treatment of patients who are unable to pay for these supplies and the provision of suitable literature.

3. The provision, in so far as may be possible, for a special short course in social hygiene and venereal disease control for public health nurses at the universities.

In general, the plan for venereal disease control formulated by Surgeon-General Parran while serving as State Health Commissioner of New York will be followed. Each early case of syphilis, which means one in which the infection is of less than one year's duration, will be investigated, locally, and diligent efforts will be made to identify the contacts of each early case, both prior and subsequent to infection. Individuals so identified will be examined and placed under treatment as required.

Each potentially infectious syphilis case, which means all untreated cases in which the infection is of two years or less duration and all treated cases in which the required course has not been completed, will be investigated, locally, and the contacts of such case following infection will be identified, examined and placed under treatment as required. These requirements do not apply to cases under the care of a private physician.

Delinquent cases in the local community will be investigated. Each patient, reported as having discontinued treatment for more than seven days while capable of transmitting the disease, will be sought, and, if found, will be returned to treatment, using such measures as may be necessary.

The National Social Security Act, therefore, makes possible immediate action in the control of venereal diseases, and the California program in the prevention and control of syphilis is already under way.

Dr. Malcolm H. Merrill, in charge of the Syphilis Clinic at the University of California School of Medicine, is the Chief of the Bureau of Venereal Diseases of the California State Department of Public Health. Doctor Merrill is a graduate of the St. Louis University School of Medicine and has spent three years in research work at the Rockefeller Institute of Medical Research, New York City. The appointment of Doctor Merrill was announced by Dr. Walter M. Dickie, Director of the California State Department of Public Health.

SMOKE AND FUMES CLEANSED BY SUPER-SOUND WAVE IN PROCESS DEVELOPED BY BUREAU OF MINES

The United States Department of the Interior, through its Bureau of Mines, sends out the following bulletin:

Dense clouds of fumes threatening the greenery and freshness of a countryside, subdued at the shriek of a whistle! Columns of choking smoke darkening the skies of teaming cities cleansed at the command of a sound wave! Precious particles of gold, silver, lead, copper, and zinc, bound skyward from the smelter stack, knocked out of the fume and collected as valuable byproducts! Fragments of unburned coal and ash, belched from factory chimneys, bent on soiling the housewife's linen or smirching the surface of fresh paint, diverted from its malignant course at the behest of a "supersonic wave" that may be of such high pitch that you cannot even hear it.

Such is the promise of a device invented by H. W. St. Clair, metallurgist, United States Bureau of Mines, which will be demonstrated in the North Interior Building, Washington, D. C., Saturday, February 13, at 10 a. m. The device should be of real aid in solving the smelter-fume problem, which has for years been the source of expensive litigation due to suits brought by property owners charging damage to vegetation, live stock, and water supplies. The device should also be of value in helping to curb the smoke nuisance in large cities, which has been responsible for injury to property and health running into many millions of dollars annually.

It has long been known that, when sound waves are passed through a tube containing a fine powder, the powder will be concentrated at points that are free from vibratory motion. It has also been known that waves of extremely high frequency affected the diffusion of solid or liquid particles in a gas. However, as the Bureau of Mines points out, no practical application has previously been made of this knowledge.

The St. Clair method merely passes the smoke or fume through a tube in which standing sound waves are established. These standing waves are produced by so adjusting the length of the tube that waves reflected from the upper end are in phase with the original sound waves set up at the lower end.

In order that the process may work at its best, the wavelength used must be approximately equal to the diameter of the tube. For a tube of practicable diameter, this means that the frequencies used will vary from 3 to 20 kilocycles per second. A person of acute hearing can detect waves of frequencies up to about 5 kilocycles; those of greater frequency are above the auditory range and hence are sometimes called "supersonic."

To generate sound waves of this frequency, several types of equipment may be used. Mr. St. Clair has used what is technically known as the magneto-strictive method, but for purposes of popular demonstration, an acoustic generator is used. This, in fact, is merely a shrill whistle. The sound waves produced by the whistle are reflected in phase with the original waves from the top of the tube and cause the solid particles to fall out of the gas stream. The action is similar to the effect produced by drawing the bow of a violin over a metal plate on which dust particles are deposited, when the vibrations cause the particles to arrange themselves in groups.

The Bureau of Mines for many years past has been interested in the problem of smelter fumes. As long ago as 1929 it began work on the possibility of settling smoke by means of acoustic waves.

The installation of the process that has now been devised should be comparatively inexpensive, as it utilizes simple sound waves instead of the more elaborate processes employed in other fume-treatment methods, and is, therefore, adaptable to the smaller plants.

Patents covering the new process will be applied for by members of the staff of the Bureau of Mines for the benefit of the public.

The process will be demonstrated at the annual meeting of the American Institute of Mining and Metallurgical Engineers in New York next week, the demonstration in Washington being a preview for officials of the Department of the Interior.